swissbit®

Product Fact Sheet

Industrial CFast™ Card

F-66 Series

SATA Gen3 – 6.0 Gbit/s, pSLC

Commercial and Industrial Temperature Grade

Date: October 22, 2019
Revision: 1.02

everbit™



made in germany

Product Fact Sheet
F-66 Series

Product Summary

- **Capacities:** 4 GBytes, 8 GBytes, 16 GBytes, 30 GBytes, 60 GBytes, 120 GBytes
- **Form Factor:** CFast-Sized Solid State Drive (36.4 mm x 42.8 mm x 3.6 mm)
- **Compliance:** SATA Gen3 – 6 Gbit/s (Gen2 – 3 Gbit/s and Gen1 – 1.5 Gbit/s backward compatible)
- **Command Sets:** Supports ATA/ATAPI-8 and ACS-2
- **Performance:**
  - Read Performance: Sequential Read up to 520 MBytes/s, Random Read 4K up to 80,000 IOPS
  - Write Performance: Sequential Write up to 415 MBytes/s, Random Write 4K up to 75,000 IOPS
- **Operating Temperature Range*:** Commercial: 0 °C to 70 °C; Industrial: -40 °C to 85 °C
- **Storage Temperature Range:** -40 °C to 85 °C
- **Operating Voltage:** 3.3 V ± 5%
- **Power (Max Capacity):** Read (Active): 1.4 W; Write (Active): 1.8 W; Idle: 380 mW; Slumber: 116 mW
- **Data Retention:** 10 Years @ Life Begin / 1 Year @ Life End
- **Endurance in TeraBytes Written (TBW) Max Capacity†:** Client > 1805; Embedded > 495; Enterprise > 465
- **Shock/Vibration:** 1,500 g / 50 g
- **Hardware BCH Code ECC:** up to 66 bit correction per 1 KByte page
- **Mean Time Between Failure:** > 2,000,000 hours
- **Data Reliability:** < 1 non-recoverable error per 10^{16} bits read

Product Features

- Pseudo SLC Flash with 20,000 Program/Erase Cycles and everbit™ Reduced Write Amplification
- Dynamic and Static Wear Leveling
- Subpage Mode Flash Translation Layer (FTL)
- Active and Passive Data Care Management
- Lifetime Enhancements
  - Dynamic Bad Block Remapping
  - Write Amplification Reduction
- On-Board Power Fail Protection
- AHCI, TRIM, and NCQ Support
- ATA Security Feature Set Support
- DEVSLP Compatible
- In-Field Firmware Update
- Enterprise Grade Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.)
- AES256 Encryption (on request)
- 30 µinch Gold-Plated Connector (on request)
- Swissbit Life Time Monitoring (SBLTM) Tool and SDK for SBLTM (on request)

Why Swissbit?

Swissbit is focused on the design, development, manufacture, and support of leading edge memory and storage solutions for the worldwide OEM/ODM marketplace. As a global supplier, Swissbit recognizes and addressees the higher level of application requirements of today's industrial, Netcom, and automotive customers by providing best-in-class products and services, with uncompromised attention to driving overall value and quality.

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* Adequate airflow is required to ensure the temperature, as reported in the S.M.A.R.T. data, does not exceed 115°C (industrial temperature drive) and 100°C (commercial temperature drive) respectively.

† According to JEDEC (JESD47I), the time to write the full TBW is a minimum of 18 months. Higher average daily data volume reduces the specified TBW. The values listed are estimates and are subject to change without notice.